



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,957	01/19/2001	Bruce E. Kaskel	07844-416001 / P380	9167
21876	7590	09/08/2004	EXAMINER	
FISH & RICHARDSON P.C. 3300 DAIN RAUSCHER PLAZA MINNEAPOLIS, MN 55402			JANKUS, ALMIS R	
			ART UNIT	PAPER NUMBER
			2671	11

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,957

Applicant(s)

KASKEL, BRUCE E.

Examiner

Almis R Jankus

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 16-20 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-15 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Applicant's amendment has been fully considered in preparing this office action.

2. Claim 7 is objected to for not having an ending bracket corresponding to the starting bracket "[The method ...".

3. Claims 1-6 and 9-15 stand rejected under 35 U.S.C. 102(e) as being anticipated by Knittel et al.

With respect to claim 1, Knittel et al. teaches the claimed identifying an error tolerance, at column 10 lines 53-54 where the error tolerance is whatever precision is desired; selecting a starting point and a set point on a curve defined by the function, at figure 12 with the starting point being Guess 1 and the set point being the next power of 2 number; defining a linear step from the start point to the set point, at column 10 lines 19-23; calculating a maximum error between the linear step and the curve, at column 10 lines 24-27; if the maximum error is less than or equal to the error tolerance, approximating a portion of the gradient corresponding to the linear step with the linear step, at column 10 lines 37-38 (item 5.) and at column 10 lines 53-54; if the maximum error is more than the error tolerance, selecting a new set point on the curve closer to the starting

Art Unit: 2671

point and repeating the calculating step and error checking steps, at column 10 lines 31-36.

Claim 2 further requires the first set point selected to be an end point of the curve. Knittel et al. Teaches this at figure 12.

Claim 3 further requires the new set point selected to be half the distance between the set point and the starting point. Knittel et al. Teaches this at column 10 lines 31-36.

Claim 4 further requires the step of approximating the portion of the gradient to include determining if the set point is an end point for the curve; if the set point is not an end point for the curve, setting the set point as a new starting point and continuing the process including selecting a new set point; else, ending the process and approximating the gradient using the defined linear steps. Knittel et al. Teaches this at figure 12 and at column 10.

Claim 5 further requires the new set point to be selected using the calculated maximum error. Knittel et al. Teaches this at column 10 lines 48-52.

Claim 6 further requires the new set point to be selected as being a point that corresponds to a linear step having a maximum error equal to the error

Art Unit: 2671

tolerance. Knittel et al. Teaches iterating until this condition is reached, at column 10.

Claim 9 further requires the error tolerance to be a visual tolerance.

Knittel et al. teaches this at column 1 lines 15-18 as lighting values using gradient magnitude vectors.

Claim 10 further requires using Newton's Method to select a set point on the curve to minimize the error between an approximation produced by the method and the curve. Knittel et al. teaches this at column 10 lines 12-16.

Claim 11 is similar to claim 1 but requires selecting an optimal number of set points on a curve defined by the function. Knittel et al. Teaches the claimed selecting as iterating until the optimal number of set points is achieved.

Claim 12 is similar to claim 11 but requires Newton's Method, which is taught at Knittel et al. at column 10; and where each linear portion is defined by two linear stops, with continued iteration. Knittel et al. Teaches this at column 10.

Claims 13, 14, and 15 are similar to claims 1, 11, and 12 respectively and further require a computer program stored on a tangible medium. Knittel et al. Teaches this at columns 1-2.

Art Unit: 2671

4. Claims 8 and 16-20 are allowed.

5. Applicant's arguments filed 8/22/03 have been fully considered but they are not persuasive.

In the remarks, applicant argues that Knittel does not teach or suggest approximating an gradient or portions thereof with a linear step(s); that Knittel's curve, though a representative of a function, is not representative of a color transition associated with a gradient; and that Knittel does not, having determined its "set points", approximate a curve using linear segments formed by connecting the set points. However, at column 1 lines 17-18 Knittel teaches modulating lighting values using gradient magnitude vectors and complex functions. Modulating lighting values corresponds to color transitions; using gradient magnitude vectors corresponds to the "associated with a gradient" requirement. Further, Knittel teaches approximating a curve using linear segments formed by connecting the points at column 11 lines 20-38, and at column 12 lines 37-43.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2671

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almis R Jankus whose telephone number is 703-305-9795. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on 703-305-9798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2671

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AJ



ALMIR R. JANKUS
PRIMARY EXAMINER